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Your attention is invited

**NEWS
OF THE
STRUCTURAL
DIVISION
OF
ASCE**



JOURNAL OF THE STRUCTURAL DIVISION
PROCEEDINGS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS



DIVISION ACTIVITIES

STRUCTURAL DIVISION

Proceedings of the American Society of Civil Engineers

NEWS

July, 1958

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JOINT MEETING

AMERICAN SOCIETY OF CIVIL ENGINEERS

and

INTERNATIONAL ASSOCIATION FOR BRIDGE AND STRUCTURAL
ENGINEERING

ASCE CONVENTION, NEW YORK, OCTOBER 13-17, 1958

A unique opportunity to hear and meet some of the world's leading authorities on the design and behavior of structures and properties of materials will be provided at the October ASCE convention in New York. Thirteen European and fourteen American speakers will present papers at a joint meeting. Eight European countries will be represented.

The result of two years of planning and effort by members of the Society and the U. S. Council of IABSE, the meeting will cover a wide range of topics in steel and concrete properties, design and research. There will be eight stimulating half-day sessions.

The meeting promises to be one of the most profitable and best attended in many years. The program has been arranged to give a well-rounded picture of the most advanced current research developments and practice in Europe and the United States.

The technical program and all arrangements are being made by the Structural and Engineering Mechanics Divisions of ASCE and the U. S. Council of

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IABSE. The Construction Division of the Society also joins in co-sponsoring the Thursday afternoon and Friday morning sessions. The meeting has been made possible by a grant from the National Science Foundation and other contributions from organizations and individuals. The generous financial support of the meeting is a tribute to the national and international prestige and leadership of ASCE and IABSE in the civil engineering profession.

The IABSE was founded in 1929 with headquarters in Zurich, Switzerland, after two international conferences on bridge engineering had revealed a need for such an organization. Its aims are to promote collaboration between scientists and engineers of different countries and to provide a means for the exchange of ideas, theoretical and practical knowledge, and the results of research. It holds congresses every three to five years, sponsors committee work, and reports the technical work of its members. The publications and congress papers form a technical reference library of unusual excellence in the field of structural engineering.

The business affairs of the Association are managed by an Executive Committee, elected by a Permanent Committee which meets yearly and manages all other affairs of the Association. Each country has representation on the Permanent Committee in proportion to its membership.

An association of United States members of IABSE was formed in 1939. The U. S. Council is the managing organization of the IABSE within the United States, and elects U. S. members of the Permanent Committee.

Membership in IABSE is open to members of a recognized national society in the engineering field, and to others who possess the requisite scientific or technical knowledge. Total membership is now about 2,500, of whom about 250 are in the United States. Many members of ASCE have become members of IABSE to further broaden their knowledge of worldwide developments and research in structures.

Further information concerning IABSE can be obtained from Professor C. M. Antoni, Secretary-Treasurer, U. S. Council IABSE, Department of Civil Engineering, Syracuse University, Syracuse 10, N. Y.

The tentative arrangement of the technical program of the joint meeting in New York is as follows:

Monday Morning - October 13

RESEARCH and DESIGN - PLASTICITY in STEEL

Development and Application of the Plastic Method of Designing Steel Structures

John F. Baker, Member IABSE and ASCE, Professor, Head, Department of Engineering, University of Cambridge, Cambridge, England

Ductility as a Basis for Steel Design

Lynn S. Beedle, Associate Member ASCE, Research Professor, Lehigh University, Bethlehem, Pennsylvania

Some Recent Developments in Plastic Analysis and Design

Daniel C. Drucker, Member ASCE, Professor, Chairman, Division of Engineering, Brown University, Providence, Rhode Island

Monday Afternoon - October 13

**RESEARCH and DESIGN - ULTIMATE STRENGTH in REINFORCED
CONCRETE and FOLDED PLATE STRUCTURES**

Effects of Research on Modern American Structural Concrete Design

Eivind Hognestad, Member ASCE and IABSE, Manager, Structural Development Section, Portland Cement Association, Chicago, Illinois

Ultimate and Other Design Criteria for Reinforced and Prestressed Concrete Frames

A. L. L. Baker, Member IABSE, Professor, Concrete Technology, University of London, London, England

Design and Economics of Reinforced Concrete Folded Plate Construction of Roofs and Floors

Charles S. Whitney, Member ASCE and IABSE, Partner, Ammann and Whitney, Consulting Engineers, New York, New York

Tuesday Morning - October 14

MODEL and ANALYTICAL RESEARCH - DAMS and SHELLS

Modern Trends in the Design of Italian Arch Dams and Model Confirmation

Guido Oberti, Member IABSE and ASCE, Professor, Polytechnic School of Turin and Manager, Experimental Institute for Models and Structures, Bergamo, Italy

Application of Shell Theory to Arch Dams

Alfred L. Parme, Member ASCE, Manager, Structural and Railways Bureau, Portland Cement Association, Chicago, Illinois

Methods of Calculation in Civil Engineering (Abstract only)

P. Lardy, Member IABSE, Professor, Masonry Construction, Institute of Technology, Zurich, Switzerland

Theory and Research in Concrete Shell Design

A. M. Haas, Member IABSE, Professor, Concrete and Concrete Construction, Institute of Technology, Delft, Holland

Tuesday Afternoon - October 14

RESEARCH in DYNAMICS and FATIGUE OF METALS

Correlation of Actual Suspension Bridge Behavior with the Prediction from Model Tests and Theoretical Analysis

George S. Vincent, Member ASCE and IABSE, Division of Physical Research, Bureau of Public Roads, Washington, D. C.

The Behavior of Structures During Earthquakes

George W. Housner, Member ASCE and IABSE, Professor, Applied Mechanics, California Institute of Technology, Pasadena, California

Use of High Speed Computer in Structural Dynamics: Shock, Vibration, Earthquake and Blast

Nathan M. Newmark, Member ASCE and IABSE, Professor, Head, Department of Civil Engineering, University of Illinois, Urbana, Illinois

Theory and New Test Results on Fatigue of Metals

F. Stüssi, President, IABSE, Professor, Institute of Technology, Zurich, Switzerland

Thursday Morning - October 16

STABILITY CONSIDERATIONS in METAL STRUCTURES

Stability Considerations in the Design of Steel Structures

C. Massonnet, Member IABSE, Professor, Theoretical and Applied Mechanics, University of Liege, Liege, Belgium

New Aspects Concerning Inelastic Instability of Steel Structures

Bruno Thürlimann, Member ASCE and IABSE, Associate Professor, Civil Engineering, Lehigh University, Bethlehem, Pennsylvania

Some Stability Problems Concerning Compressed Steel Members and Arch Bridges

Georg Wästlund, Member Executive Committee and Technical Advisor, IABSE, Professor, Bridge Building and Structural Engineering, Royal Institute of Technology, Stockholm, Sweden

Thursday Afternoon - October 16

PRESTRESSED CONCRETE and CONCRETE BRIDGES

Recent Developments and Research Activities in Prestressed Concrete in Europe

Yves Guyon, Member IABSE, Technical Director, Technical Society for the Use of Prestressing, Paris, France

Recent Developments and Research in Reinforced and Prestressed Concrete in Great Britain

Frederick S. Snow, Member IABSE and ASCE, Consulting Engineer, London, England

Research and Design of Prestressed Concrete Slabs and Shells in the United States

T. Y. Lin, Member ASCE and IABSE, Professor, Civil Engineering, University of California, Berkeley, California

Recent Advances and Research in the Design and Behavior of Concrete Arch Bridges

Hubert Rüschi, Member IABSE, Professor, Institute of Technology, Munich, Germany

Friday Morning - October 17

STEEL BRIDGES AND BUILDING FRAMES

The Design, Construction and Performance of Short Flexible Suspension Bridges for Heavy Trucks

Sven O. Asplund, Member IABSE and ASCE, Professor, Structural Mechanics, Chalmers University, Gothenburg, Sweden

Structural Steel Design as Affected by Fabrication and Erection Requirements

E. Leland Durkee, Member ASCE, Engineer of Erection, Fabricated Steel Construction, Bethlehem Steel Company, Bethlehem, Pennsylvania

Steel Buildings and Fire Protection in Europe

C. F. Kollbrunner, Member and Auditor IABSE, Managing Director, Conrad Zschokke, Ltd., Doettingenand, Zurich, Switzerland

Trends in Development in Steel Structures in America

Thomas C. Kavanagh, Member ASCE and IABSE, Partner, Praeger-Kavanagh Engineers, New York, New York

Friday Afternoon - October 17

SHELL STRUCTURES

Conception and Execution of the Shell Vault of the Palace of Exposition of the National Center of Industries and Techniques

Nicolas Esquillan, Member IABSE, Technical Director, Boussiron Enterprises, Paris, France

Secondary Stresses in Shells

Mario G. Salvadori, Member ASCE and IABSE, Professor, Civil Engineering, Columbia University, New York, New York
and

Hans H. Bleich, Member ASCE and IABSE, Professor, Civil Engineering, Columbia University, New York, New York

Design of Multiple Ribless Shells

Anton Tedesco, Member ASCE and IABSE, Vice President, Roberts and Schaefer Company, New York, New York

In addition to the technical program, there will be a Society luncheon on Tuesday, October 14, at which an internationally known speaker will deliver the principal address. The luncheon, and the social activities of the convention, will give members an unusual opportunity to become acquainted with the distinguished foreign visitors and to renew old acquaintances with Society members.

The joint meeting affords a unique opportunity to make a substantial contribution to engineering education throughout the country. Several of the foreign speakers will make lecture tours before and after the meeting. More than twenty universities from coast to coast will be included in the itineraries of eight visiting professors and practicing engineers. Their names and itineraries will be published later.

This meeting makes possible a broad exchange of knowledge of the latest scientific and engineering developments. It is an opportunity to head and meet leaders in your profession. Start planning now to attend the October convention in New York from Monday through Friday. You cannot afford to miss a single session. Clip and send in now the coupon at the end of this Newsletter to show you expect to be there and that you will attend the Society luncheon, Tuesday, October 14. This information is needed to make adequate arrangements to serve you and for your comfort.

Further details of the meeting and synopses of the papers will be included in an article describing the meeting fully. It is scheduled for August CIVIL ENGINEERING. Don't miss it!

ACTIVITY IN COMMITTEE ON MASONRY AND REINFORCED CONCRETE

Four task committees of the Structural Division's Committee on Masonry and Reinforced Concrete have reported recent meetings in Chicago leading to constructive action.

The Committee on Reinforced Masonry Design and Practice reviewed progress made in the preparation of a guide for design and construction, and planned member assignments to expedite completion of this urgently needed publication. The committee has underway a comprehensive annotated bibliography on reinforced concrete masonry which will somewhat parallel a similar bibliography on reinforced brick masonry prepared at the University of California. Committee members from Massachusetts and California attended as well as those nearer Chicago, all showing intense interest in the development of this field.

The Joint Committee on Composite Construction is concentrating its efforts on the preparation of recommendations for composite construction in buildings because there are no available specifications in that field. The recommendations will cover the usual types of composite construction including concrete and concrete, steel and concrete, and timber and concrete. The committee will provide papers for a technical session at a 1959 convention.

The Joint Committee on Limit Design held its first formal meeting and took significant actions. Two members submitted for review and discussion a preliminary draft of a report prepared for publication in 1958 entitled "Review of Limit Design for Structural Concrete." A preliminary report was made to the committee on the test program on continuous beams soon to be underway at the Portland Cement Association laboratories. Subcommittees were appointed to study limit design applied to frames and the yield line method for slabs. A symposium is being planned for presentation at a 1960 Society convention.

The Joint Committee on Shear and Diagonal Tension has set its sights for completion of ultimate strength design recommendations for beams and slabs with and without shear reinforcement by the end of this year or early next

year. It was decided that ultimate strength design should be based on the cracking load of the beam, that is, the strength at the time the first serious diagonal crack appears. Several more meetings are planned for this year to push this important task to completion.

The Joint Committees mentioned represent joint activities of ASCE and ACI.

COMMITTEE ON ELECTRONIC COMPUTATION

The March 1958 Newsletter lists four of the five task committees making up the Committee on Electronic Computation. The fifth task committee, the name and address of its chairman and an abstract of the statement of purpose is listed below.

Mathematical Methods: Glen V. Berg
Instructor in Civil Engineering
University of Michigan
Ann Arbor, Michigan

Purpose: To present existing mathematical methods and to evolve, and encourage the development of, new mathematical methods which enable the high speed digital computer to be used effectively in solving problems of structural analysis and design.

HYDRAULICS CONFERENCE

The seventh Hydraulics Conference sponsored by the Hydraulics Division of the Society will be held this year in Atlanta, Georgia, on August 20, 21, and 22. The technical sessions will be held on the Georgia Tech. campus and will feature timely papers by experts in the fields of Hydrology, Fluid Mechanics and Applied Hydraulics. In addition, an extensive program of social activities is planned for family participation. The full program, as well as registration forms, will appear in the July issue of "Civil Engineering."

NEWSLETTER EDITOR

The Executive Committee has appointed an editor to assemble all material which is to be published in the Newsletter. News items for the September issue should be submitted before July 20th to:

Gerard F. Fox, Editor
Howard, Needles, Tammen & Bergendoff
99 Church Street
New York 7, New York

ADVANCE INFORMATION ON ATTENDANCE
JOINT MEETING ASCE AND IABSE

ASCE CONVENTION, NEW YORK, OCTOBER 13-17, 1958

I plan to attend sessions

Mon., Tues., Thur., Fri.

Do you plan to attend the ASCE-IABSE Luncheon on Tuesday?

Yes No

Send to Professor James P. Michalos, Chairman,
Department of Civil Engineering, New York University,
University Heights, New York 53, New York

Signature _____
